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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/050,308  | 01/15/2002  | Douglas D. Fletcher  | 7780.779US01        | 8721             |
| 32692   | 7590        | 02/03/2005           |                     | EXAMINER         |
| 3M INNOVATIVE PROPERTIES COMPANY<br>PO BOX 33427<br>ST. PAUL, MN 55133-3427 |             |                      |                     | PEREZ, ANGELICA  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2684                |                  |

DATE MAILED: 02/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

|                               |                  |  |
|-------------------------------|------------------|--|
| Application No.               | FLETCHER ET AL.  |  |
| 10/050,308                    |                  |  |
| Examiner<br>Angelica M. Perez | Art Unit<br>2684 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) Responsive to communication(s) filed on 13 September 2004.  
2a) This action is FINAL.                    2b) This action is non-final.  
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) Claim(s) \_\_\_\_\_ is/are allowed.  
6) Claim(s) 1-21 is/are rejected.  
7) Claim(s) 12 and 13 is/are objected to.  
8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) The specification is objected to by the Examiner.  
10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 09/21/04
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) Notice of Informal Patent Application (PTO-152)  
6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 12 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claims 12-13 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: "second frequency range".

### ***Allowable Subject Matter***

4. Claims 12 and 13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Since the examiner assumes that the applicant wrote claims 12 and 13 thinking of them depending on claim 10. Claims would be allowable if the limitations of claims 1 and 10 are included in the objected claims.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which

said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5, 7-8, 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Menard (Menard et al.; US Pub. No.: 2003/0,013,503 A1) in view of Brooks (Brooks, Randall D.; US Patent No.: 5,203,017 A).

Regarding claim 1, Menard teaches of a wireless intercom system comprising (paragraph 1) a wireless intercom unit comprising (figure 4, item 114): an electronics housing including a first side, where the first side is configured to interface with a planar surface (figure 4, item 116 and paragraph 35; where the first side corresponds to the side that will be in contact with the wall or table); a microphone configured to receive an audio signal input (figure 1, item 13 and paragraph 21), the microphone located on a portion of the housing other than the first side (figure 4, item 140; where the microphone is located opposite from the first side that is in contact with the wall/table); a speaker configured to broadcast an audio signal output (figure 1, item 130; e.g., "played out loud"), the speaker located on a portion of the housing other than the first side (figure 4, item 130; speaker being opposite to the first side that has contacts with the wall/table); a first intercom transceiver for a first radio frequency range operably connected to the microphone and the speaker (paragraph 20; where microphone and speaker are "coupled" to the transceiver); and an input device located on a portion of the housing other than the first side (paragraph 0020, lines 10-11; where a push-to-talk switch allows input of voice).

Menard does not specifically teach of a base station that communicates with the wireless intercom unit via radio waves; and a speaker post that communicates with the base station via radio waves.

In related art, concerning a method and apparatus for establishing wireless communication with multiple customer stations, Brooks teaches of a base station that communicates with the wireless intercom unit via radio waves (column 3, lines 35-40); and a speaker post that communicates with the base station via radio waves (column 3, lines 28-47).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Menard's wireless intercom system with Brooks's base station and speaker post in order to connect clients with customer service representatives as well as to add convenience to the service, as taught by Brooks.

Regarding claim 2, Menard in view of Brooks teaches all the limitations of claim 1. Menard further teaches where the electronics housing includes a second side where the second side is configured to face a user when the wireless intercom unit is resting on the first side, where the microphone and input device are located on the second side (figure 4, item 116 and paragraph 0035; where the first side corresponds to the side that will be in contact with the wall or table and the second side faces the operator as seen in figure 4).

Regarding claim 3, Menard in view of Brooks teaches all the limitations of claim 2. Menard further teaches where the speaker is located on the second side (figure 4, item 140).

Regarding claim 4, Menard in view of Brooks teaches all the limitations of claim 1. Menard further teaches where the first side is substantially flat (figure 4, item 116 and paragraph 0035; where the first side that will be in contact with the wall or table is "substantially flat").

Regarding claim 5, Menard in view of Brooks teaches all the limitations of claim 1. Menard further teaches the first side comprises a supporting structure to support the wireless intercom unit when it is set on a planar surface (figure 4, item 116 and paragraph 0035).

Regarding claim 7, Menard in view of Brooks teaches all the limitations of claim 1. Menard further teaches where the wireless intercom unit further comprises a bracket attached to the first side configured to be mounted on a substantially vertical planar surface (paragraph 0035; where "bracket" corresponds to the housing being "adapted for mounting to a wall" indicating a preference of design).

Regarding claim 8, Menard in view of Brooks teaches all the limitations of claim 1. Menard further teaches where the input device is selected from a group of a power control input device, a volume control input device, a channel control input device and a page mode input device (paragraphs 0004 and 0023; where the examiner has selected from the choices given, "page mode input device").

Regarding claims 12 and 13, Menard in view of Brooks teaches all the limitations of claim 1. Menard further teaches of a switch (figure 1, item 120).

Menard in view of Brooks does not teach where the switch comprises a switch housing; a switch housing ; a pressure sensor located inside or on the

surface of the switch housing; and a radio frequency transmitter for transmitting radio waves in a third radio frequency range; and where the wireless intercom system further comprises an auxiliary receiver for receiving radio waves in a third radio frequency range.

In related art, concerning a method and apparatus for establishing wireless communication with multiple customer stations, Brooks teaches where the switch comprises a switch housing; a switch housing (paragraph 11, lines 1-4 and paragraph 64); a pressure sensor located inside or on the surface of the switch housing (paragraph 60; e.g., "air pressure sensor"); and a radio frequency transmitter for transmitting radio waves in a third radio frequency range; and where the wireless intercom system further comprises an auxiliary receiver for receiving radio waves in a third radio frequency range (column 5, lines 30-34 and 54-59; where earpiece items inherently operate at lower frequencies than wireless intercom systems, e.g., around 20-25KHz. Moreover, third frequency range corresponds to second frequency range since there is no antecedent basis for the claim).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Menard's wireless intercom system with Brooks's second frequency range in order to be able to establish communication through an earpiece, as taught by Brooks.

7. Claims 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Menard in view of Brooks and, further in view of Gertz (Gertz, Jonathan; US Patent No.: D 371,784 S).

Regarding claim 6, Menard in view of Brooks teaches all the limitations of claim 5.

Menard in view of Brooks does not teach where the supporting structure comprises four posts on the first side.

In related art concerning the design of an intercom unit, Gertz teaches of a supporting structure comprises four posts on the first side (see figure 6).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Menard's and Brooks's intercom system with Gertz's intercom design as an inventor's design choice.

Regarding claim 9, Menard in view of Brooks teaches all the limitations of claim 1.

Menard in view of Brooks does not teach where the microphone comprises an elongated neck to support the microphone above the electronics housing.

In related art, concerning the design of an intercom unit, Gertz teaches where the microphone comprises an elongated neck to support the microphone above the electronics housing (See figure 2).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Menard's and Brooks's intercom system with Gertz's elongated neck as an inventor's design choice.

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Menard in view of Brooks, and further in view of Newman (Newman, Peran V.L.; US 6,091,329 A).

Regarding claim 10, Menard in view of Brooks teaches all the limitations of claim 1. Brooks further teaches an earpiece configured to be worn on an ear of a user (column 5, lines 54-59), the earpiece comprising an earpiece speaker (column 5, lines 54-59; where the earpiece, in the invention, requires a speaker to fulfill its intended function), an earpiece microphone, and an earpiece transceiver for transmitting and receiving radio waves in a second frequency range (column 5, lines 30-34 and 54-59; where earpiece items generally operate at lower frequencies, e.g., around 20-25KHz.).

Menard in view of Brooks does not teach where the wireless intercom unit further comprises a second intercom transceiver for the second radio frequency range.

In related art, concerning a monitor-hands-free intercom, Newman teaches of where the wireless intercom unit further comprises a second intercom transceiver for the second radio frequency range (column 5, lines 44-56; "each of the transceiver units 12 and 14 operate at two of two selectable radio frequencies ... or any other suitable frequency").

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Menard's and Brooks intercom system with Newman's headset in order to use an earpiece, as taught by Newman.

9. Claims 11 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Menard in view of Brooks, and further in view of Fitzgerald.

Regarding claims 11 and 15 Menard in view of Brooks teaches all the limitations of claims 10 and 14, respectively.

Menard in view of Brooks does not teach where the earpiece further comprises a curved structure configured to fit around the back side of the outer ear of a user, where the earpiece speaker is connected to the curved structure and is configured to rest proximate the outer ear of the user, where the earpiece microphone is connected to the earpiece speaker and is configured to be in close proximity to the mouth of the user.

In related art, concerning a cordless telephone headset, Fitzgerald teaches where the earpiece further comprises a curved structure configured to fit around the back side of the outer ear of a user (figure 1, item 12), where the earpiece speaker is connected to the curved structure and is configured to rest proximate the outer ear of the user (see figure 1, item 12), where the earpiece microphone is connected to the earpiece speaker and is configured to be in close proximity to the mouth of the user (see figure 1, item 62).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Menard's and Brooks intercom system with Fitzgerald's earpiece configuration in order to provide an integrated headset, as taught by Fitzgerald.

Regarding claim 14, Menard teaches of a wireless communication system comprising (paragraph 0001): a wireless intercom unit comprising (figure 4, item

114); an electronics housing (figure 4, item 116); a microphone configured to receive an audio signal input (figure 1, item 13 and paragraph 0021); a first intercom transceiver for the first channel radio frequency range (paragraph 0020); and second intercom transceiver for a second frequency range;

Menard does not specifically teach of second intercom transceiver for a second radio frequency range an earpiece transceiver for the second radio frequency range that enables communication between the earpiece and the wireless intercom unit transmitting and receiving radio waves in a second frequency range and of an earpiece transceiver for an earpiece radio frequency range; a speaker for broadcasting the audio signal output; and; an earpiece microphone; an earpiece transceiver for an earpiece radio frequency range; and a wearable structure to secure the earpiece near a user's ear; and a base station comprising a base station transceiver for the first radio frequency range that enables communication between base station and the wireless intercom unit.

In related art, concerning a monitor-hands-free intercom, Brooks teaches of second intercom transceiver for a second radio frequency range an earpiece transceiver for the second radio frequency range that enables communication between the earpiece and the wireless intercom unit transmitting and receiving radio waves in a second frequency range (column 5, lines 30-34 and 54-59; where earpiece items inherently operate at lower frequencies than wireless intercom systems, e.g., around 20-25KHz.); and a base station comprising a base station transceiver for the first radio frequency range that enables

communication between base station and the wireless intercom unit (column 3, lines 35-40 and column 3, lines 28-47).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Menard's intercom system with Brooks's headset in order to provide mobility to the user, as taught by Brooks.

Menard in view of Brooks does not specifically teach a wearable structure to secure the earpiece near a user's ear.

In related art, concerning a cordless telephone headset, Fitzgerald teaches of an earpiece transceiver for an earpiece radio frequency range (lines 2-4 of the abstract); a speaker for broadcasting the audio signal output; and (lines 6-8 of the abstract); an earpiece microphone (lines 8-9 of the abstract); an earpiece transceiver for an earpiece radio frequency range (lines 2-4 of the abstract); and a wearable structure to secure the earpiece near a user's ear (see figure 1).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Menard's and Brooks intercom system with Fitzgerald's earpiece configuration in order to provide an integrated headset, as taught by Fitzgerald.

Regarding claim 16, Menard in view of Brooks; and further in view of Fitzgerald teaches all the limitations of claim 14. Brooks further teaches where the second intercom transceiver and the earpiece transceiver operate a lower power than the first intercom transceiver (column 5, lines 30-34 and 54-59; where earpieces inherently require less power than wireless intercom systems)

10. Claims 18 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills (Mills et al.; US 2003/0,092,453 A1) in view of Brooks.

Regarding claim 18, Mills teaches of a wireless communication system comprising (figure 3): a wireless intercom unit comprising (paragraph 23): a transceiver for a first radio frequency range (paragraphs 35 and 46, lines 13-17 and 7-13, respectively; where the communication between the intercom and the base station is done in a first radio frequency range); and a receiver for a second radio frequency range (paragraphs 35 and 46, lines 13-17 and 7-13, respectively; where communication between the intercom and telephone is done in a second frequency range); a microphone for receiving an audio input (paragraph 23, lines 1-4); a speaker for broadcasting an audio output (paragraph 23, lines 1-4); and a switch (paragraph 12, lines 10-13) comprising: a housing (paragraph 11, lines 1-4); where the switch is inside the housing (paragraph 64); a pressure sensor located inside or on the surface of the housing (paragraph 60; e.g., "air pressure sensor").

Mills does not specifically teach of a radio frequency transmitter for the second radio frequency range thereby enabling wireless communication between the switch and the wireless intercom unit.

In related art, concerning a method and apparatus for establishing wireless communication with multiple customer stations, Brooks teaches of second radio frequency range thereby enabling wireless communication between the switch and the wireless intercom unit (column 5, lines 30-34 and 54-59; where earpiece items inherently operate at lower frequencies than wireless

intercom systems, e.g., around 20-25KHz.); and a base station comprising a base station transceiver for the first radio frequency range that enables communication between base station and the wireless intercom unit (column 3, lines 35-40 and column 3, lines 28-47).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Menard's intercom system with Brooks's headset in order to provide mobility to the user, as taught by Brooks.

Regarding claim 20, Miller in view of Brooks teaches all the limitations of claim 18. Brooks further teaches where the switch housing comprises a rubber tread surface (paragraph 64; where a rubber tread surface is an designer's preference).

Regarding claim 21, Miller in view of Brooks teaches all the limitations of claim 18. Brooks further teaches where the transmitter of the switch is configured to operate at a lower power than is the first channel transceiver (column 5, lines 30-34 and 54-59; where the switch requires a lower power to communicate with an earpiece that inherently require less power than wireless intercom systems).

11. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of Brooks, and further in view of Pavitt (Pavitt William H. Jr.; US Patent No.: 4,517,413).

Regarding claim 19, Miller in view of Brooks teaches all the limitations of claim 18.

Miller in view of Brooks does not teach where the switch is sized to be operated by a user's foot.

In related art concerning a telephone triggered switching system that perform intercom functions, Pavitt teaches where the switch is sized to be operated by a user's foot (column 2, lines 14-26).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Miller in view of Brooks combined intercom system with Pavitt's foot switch in order to add convenience and accessibility to the system.

12. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Menard in view of Brooks, further in view of Fitzgerald; and further in view of Voroba (Voroba et al.; US patent No.: 6,311,071 B1).

Regarding claim 17, Menard teaches all the limitations of claim 14. Menard does not teach where the wireless intercom unit further comprises a switch for disabling the speaker and microphone.

In related art concerning a low-feedback compact wireless telephone that functions as an intercom, Voroba teaches of a switch for disabling the speaker and microphone (page 9, lines 31-35).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Menard's intercom system with Voroba's switch for disabling the speaker and microphone in order to save energy when the microphone is not in use, also, to make smooth transition from one mode to another.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angelica Perez whose telephone number is 703-305-8724. The examiner can normally be reached on 7:00 a.m. - 3:30 p.m., Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either the PAIR or Public PAIR. Status information for unpublished applications is available through the Private PAIR only. For more information about the pair system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600's customer service number is 703-306-0377.

Art Unit: 2684

  
Angelica Perez  
(Examiner)

  
NICK CORSARO  
PRIMARY EXAMINER

Art Unit 2684

January 13, 2005